Central Inlet Circuit Board Assembly

1. A circuit board comprising,

at least two parts, each part having

an air flow inlet edge through which cooling air flow is received,

an air flow outlet edge through which the air flow exits,

each part being disposed on opposing sides of a central source of cooling air for the circuit board.

2. The circuit board of claim 1, comprising a panel that provides any of mechanical protection and electromagnetic interference (EMI) protection when the circuit board is operationally coupled in a slot in a chassis.

3. The circuit board of claim 1, wherein the panel comprises an inlet for cooling air.

4. The circuit board of claim 3, wherein the central source of cooling air comprises the panel inlet.

5. The circuit board of claim 4, wherein the panel inlet is disposed in a central region of the panel.

6. The circuit board of claim 3, wherein the panel inlet is substantially aligned with an air flow inlet of a chassis to which the circuit board is operationally coupled.

7. A circuit board comprising,

at least two parts, each part having

an air flow inlet edge through which cooling air flow is received,

an air flow outlet edge through which the air flow exits,

one or more flow-diverting elements that define, at least in part, impedance to the air flow,

each part being disposed on opposing sides of a central source of cooling air for the circuit board.

8. The circuit board of claim 7, wherein one or more of the flow-diverting elements are disposed nearer one of the air flow inlet and air flow outlet edges of the respective part than the other of those edges of that part.

9. The circuit board of claim 7, wherein one or more of the flow-diverting elements comprises a heat dissipative element.

10. The circuit board of claim 9, wherein the heat dissipative element is mounted on any of a substrate, cold plate or circuit component that comprise the circuit board.

11. The circuit board of claim 7, comprising a cover affixed to the circuit board, the cover defining a plenum in a region of an aforesaid part of the circuit board.

12. The circuit board of claim 7, comprising at least two covers, each defining a plenum in a region of a respective aforesaid part of the circuit board.

13. The circuit board of claim 11, wherein one or more of the flow-diverting elements are disposed in the plenum.

14. The circuit board of claim 13, wherein one or more flow-diverting elements are adapted to shape an air flow pattern within the plenum.

15. A circuit board comprising,

at least two parts, each part having

an air flow inlet edge through which cooling air flow is received,

an air flow outlet edge through which the air flow exits,

one or more flow-diverting elements that define, at least in part, that part's impedance to air flow in the chassis, wherein those one or more flow-diverting elements are adapted so that the impedance of that part is sized in relation to that one or more further circuit boards a chassis in which the circuit board is mounted,

each part being disposed on opposing sides of a central source of cooling air for the circuit board.

16. A circuit board of claim 15, the further improvement wherein the flow-diverting element comprises a heat dissipative element.

17. A circuit board of claim 16, wherein the heat dissipative element is mounted on any of a substrate, cold plate or circuit component that comprise the circuit board.

18. A circuit board of claim 15, the further improvement comprising a cover affixed to the circuit board, a plenum being defined in a region between the cover and at least one of the aforesaid parts.

19. A circuit board of claim 18, the further improvement wherein one or more of the flow-diverting elements are disposed in the plenum.

20. A circuit board of claim 18, wherein one or more flow-diverting elements are adapted to shape an air flow pattern within the plenum.

21. A circuit board of claim 18, where at least one flow-diverting element is adapted to divert air flow to/from components or regions of the board requiring greater/less air flow.

22. A circuit board of claim 18, wherein the cover is removably coupled to the circuit board.

23. A circuit board of claim 18, wherein the cover is substantially planar.

24. A circuit board of claim 18, wherein the cover is any of sized and shaped substantially similarly to one or more of the aforesaid parts.

25. A digital data processor comprising

a chassis,

one or more circuit boards disposed in the chassis, each circuit board comprising,

at least two parts, each part having

an air flow inlet edge through which cooling air flow is received,

an air flow outlet edge through which the air flow exits,

one or more flow-diverting elements that define, at least in part, that part's impedance to air flow in the chassis, wherein those one or more flow-diverting elements are adapted so that the impedance of that part is sized in relation to that one or more further circuit boards in the chassis,

each part being disposed on opposing sides of a central source of cooling air for the circuit board.

26. The digital data processor of claim 25, comprising a panel that provides any of mechanical protection and electromagnetic interference (EMI) protection when the circuit board is operationally coupled in a slot in the chassis.

27. The digital data processor of claim 25, wherein the panel comprises an inlet for cooling air.

28. The digital data processor of claim 27, wherein the central source of cooling air comprises the panel inlet.

29. The digital data processor of claim 28, wherein the panel inlet is disposed in a central region of the panel.

30. The digital data processor of claim 27, wherein the panel inlet is substantially aligned with an air flow inlet of the chassis.